

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/041329

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06F19/00 G01N33/569 G01N33/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| X | WO 01/89560 A (THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY) 29 November 2001 (2001-11-29) the whole document | 1,4-6 |
| X | RANISE ANGELO ET AL: "Design, synthesis, SAR, and molecular modeling studies of acylthiocarbamates: A novel series of potent non-nucleoside HIV-1 reverse transcriptase inhibitors structurally related to phenethylthiazolylthiourea derivatives." JOURNAL OF MEDICINAL CHEMISTRY, vol. 46, no. 5, 27 February 2003 (2003-02-27), pages 768-781, XP002343715 ISSN: 0022-2623 the whole document | 1,4-6 |

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

8 document member of the same patent family

Date of the actual completion of the international search

7 September 2005

Date of mailing of the international search report

27/09/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Thumb, W

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/041329

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| X | ITZSTEIN VON M ET AL: "RATIOANL DESIGN OF POTENT SIALIDASE-BASED INHIBITORS OF INFLUENZA VIRUS REPLICATION" NATURE, MACMILLAN JOURNALS LTD. LONDON, GB, vol. 363, 3 June 1993 (1993-06-03), pages 418-423, XP000574955 ISSN: 0028-0836 the whole document | 1,4-6 |
| X | WO 03/088125 A (TRANSTECH PHARMA, INC; SAWAFTA, REYAD, I; BAUDRY, JEROME; KUTZ, MICHAEL) 23 October 2003 (2003-10-23) the whole document in particular page 16, line 21- page 20, line17 | 30-32 |
| Y | | 1-29,33, 34, 45-78, 81-84 |
| Y | WO 03/075833 A (SIGA TECHNOLOGIES, INC; OREGON STATE UNIVERSITY; HRUBY, DENNIS, E; BOL) 18 September 2003 (2003-09-18) the whole document in particular page 22, lines 16-27; page 24, lines 12-13; Example 9; page 38, lines 3-18; page 49, lines 7-19; Figure 19 | 1-29,33, 34, 45-78, 81-84 |
| E | WO 2005/014534 A (TRANSTECH PHARMA, INC; MJALLI, ADNAN, M.M; ANDREWS, ROBERT, C; ARIMILL) 17 February 2005 (2005-02-17) Summary of the invention, pages 2 and 3; compound 12 on page 14; compound 111 on page 27 | 7,29, 45-78, 81-84 |
| P,X | BYRD CHELSEA M ET AL: "New class of orthopoxvirus antiviral drugs that block viral maturation" JOURNAL OF VIROLOGY, vol. 78, no. 22, November 2004 (2004-11), pages 12147-12156, XP002343716 ISSN: 0022-538X cited in the application the whole document | 1-34, 45-78, 81-84 |
| | -/-- | |

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/041329

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| A | MOSSESSOVA E ET AL: "ULP1-SUMO CRYSTAL STRUCTURE AND GENETIC ANALYSIS REVEAL CONSERVED INTERACTIONS AND A REGULATORY ELEMENT ESSENTIAL FOR CELL GROWTH IN YEAST" MOLECULAR CELL, CELL PRESS, CAMBRIDGE, MA, US, vol. 5, no. 5, May 2000 (2000-05), pages 865-876, XP009046439 ISSN: 1097-2765 the whole document ----- | 1-34, 45-78, 81-84 |
| A | BYRD CHELSEA M ET AL: "Molecular dissection of the vaccinia virus 17L core protein proteinase." JOURNAL OF VIROLOGY, vol. 77, no. 20, October 2003 (2003-10), pages 11279-11283, XP002343717 ISSN: 0022-538X the whole document ----- | 1-34, 45-78, 81-84 |

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2004/041329

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 7, 29, 35-84
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 81-84 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 7, 29, 45-78
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 81-84 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box II.1

Claims Nos.: 7,29,35-84

Rule 39.1(v) PCT - Presentation of information (Claims 35-44)

Rule 39.1(iii) PCT - Scheme, rules and method for doing business (Claims 79, 80)

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy (Claims 81-84)

Continuation of Box II.2

Claims Nos.: 7,29,45-78

The present claims 7, 29, and 45-78 encompass compounds, and the use of such compounds, defined only by their desired function, contrary to the requirements of clarity of Article 6 PCT, because the result-to-be-achieved type of definition does not allow the scope of the claim to be

ascertained. The fact that any compound could be screened does not overcome this

objection, as the skilled person would not have knowledge beforehand as to whether it

would fall within the scope claimed, except for the compounds disclosed in the

description, see TTP-A and TTP-B. Undue experimentation would be required to screen compounds

randomly. This non-compliance with the substantive provisions is to such an extent, that

the search was performed taking into consideration the non-compliance in determining

the extent of the search for claims 7, 29, and 45-78.

The search of claims was consequently restricted to compounds TTP-A and TTP-B, and the use thereof in pharmaceutical preparations.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/041329

| Patent document cited in search report | | Publication date | Patent family member(s) | Publication date |
|-------------------------------------------|---|---------------------|----------------------------|---------------------|
| WO 0189560 | A | 29-11-2001 | AU 6485601 A | 03-12-2001 |
| | | | WO 0189560 A1 | 29-11-2001 |
| | | | US 2002164348 A1 | 07-11-2002 |
| WO 03088125 | A | 23-10-2003 | AU 2003221884 A1 | 27-10-2003 |
| | | | AU 2003226043 A1 | 27-10-2003 |
| | | | CA 2479818 A1 | 23-10-2003 |
| | | | CA 2480202 A1 | 23-10-2003 |
| | | | EP 1495432 A2 | 12-01-2005 |
| | | | EP 1500030 A2 | 26-01-2005 |
| | | | WO 03088125 A2 | 23-10-2003 |
| | | | WO 03088090 A2 | 23-10-2003 |
| | | | US 2004019432 A1 | 29-01-2004 |
| | | | US 2004010515 A1 | 15-01-2004 |
| WO 03075833 | A | 18-09-2003 | AU 2003241267 A1 | 22-09-2003 |
| | | | CA 2472119 A1 | 18-09-2003 |
| | | | EP 1478770 A2 | 24-11-2004 |
| | | | WO 03075833 A2 | 18-09-2003 |
| WO 2005014534 | A | 17-02-2005 | US 2005171148 A1 | 04-08-2005 |
| | | | US 2005059705 A1 | 17-03-2005 |
| | | | US 2005059713 A1 | 17-03-2005 |
| | | | US 2005049310 A1 | 03-03-2005 |
| | | | WO 2005014532 A1 | 17-02-2005 |
| | | | WO 2005014533 A2 | 17-02-2005 |
| | | | WO 2005014534 A1 | 17-02-2005 |